INEEL Intelligence

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A high-level monthly briefing on operations and activities at the U.S. Department of Energy's Idaho National Engineering and Environmental Laboratory – Home of Science and Engineering Solutions. Work at the lab supports the Department's business lines of environmental quality, energy resources, national security and science.

■ ENERGY RESOURCES – Scientists Host Discussions on Bolstering Biomass

INEEL scientists are hosting discussion groups and preparing a roadmap that will result in a sustainable national biomass feedstock supply system. Biomass includes agricultural crops, crop residues, forest resources and residues, dedicated energy crops, and animal wastes. Carbohydrates, oils, and lignin can be extracted from biomass and converted into gaseous, liquid, and solid fuels for transportation and electric power production. They can also be converted into products such as plastics, coatings, foams and solvents. Discussion group participants from farm and agricultural organizations, USDA, DOE, universities and biomass processors are being invited to participate in planning sessions to be held in Boise, Chicago, Minneapolis and Oklahoma City now through mid-May 2003.

■ ENVIRONMENTAL QUALITY – Waste Treatment Technology Options Evaluated

The U.S. Department of Energy is preparing to select a technology to treat the liquid sodium-bearing waste stored at the Idaho Nuclear Technology and Engineering Center's tank farm. "DOE is seeking public input and has scheduled several workshops throughout the year to provide citizens with a forum to learn more about the technology options and to provide comments about the selection process. The information gained from stakeholders will then be considered by DOE as they make the final technology selection," said Gary Milnarich, BBWI project manager for sodium-bearing waste treatment for the Idaho Completion Project. To date, the DOE has narrowed its selection to four alternatives, which include: calcination with a Maximum Achievable Control Technology (MACT) upgrade, cesium ion exchange, direct evaporation, and steam reforming.

■ NATIONAL SECURITY – Security Technology Highlighted in New School Publication

A wireless camera system designed and built by National Security Division engineers was featured in the INEEL's newly launched quarterly publication aimed at nurturing grade school students' interests in science and engineering. *Imagine* offers teachers and students a vehicle to easily learn more about some of the inventions and scientific research conducted at the Laboratory in a simple, lesson-oriented format. Each issue will include a main feature, quizzes, fun facts and other vocabulary-building features. The first issue was launched in conjunction with the Laboratory's celebration of National Engineers Week 2003. Subsequent issues will highlight kid-friendly science and technologies from each of the INEEL's research and development divisions. Imagine is available online at http://imagine.inel.gov.

■ SCIENCE – Laboratory Builds Scientific Bench Strength

Management efforts to increase the number of existing Laboratory employees with doctoral degrees as well as the number of outside doctoral candidates and post-doctoral researchers working at the INEEL are paying off. This is significant because a key metric of a national laboratory is the percentage of advanced degree researchers on staff. While the 18 post-doctoral researchers doing work on important INEEL projects is significant, the 80 current Ph.D. candidates represent the largest such group hosted by the Laboratory since the late 1990s. Thanks, in part, to Bechtel BWXT Idaho initiatives, including the All-But-Dissertation Program, the INEEL Degree Program, free literature searches, the Graduate Fellowship Program, and the Post-Doc Internship Program among others, the number of staff with doctoral degrees and the ranks of post-doctoral researchers are expected to continue to increase over the next 24 months.

For more information, contact Brad Bugger at 208-526-0833